

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

INVESTIGATION OF THE OPERATING CAPACITY)	
OF MARTIN COUNTY WATER DISTRICT)	CASE NO. 2002-00116
PURSUANT TO KRS 278.280)	

WRITTEN TESTIMONY OF JAMES D. RICE
ON BEHALF OF COMMISSION STAFF

1 **Q1 State your name and business address.**

2 James D. Rice, Public Service Commission, Post Office Box 615, Frankfort,
3 Kentucky 40602.

4 **Q2 Who is your employer?**

5 A Public Service Commission of Kentucky ("PSCKY").

6 **Q3 How long has the PSCKY employed you?**

7 A I have been an employee of the PSCKY since June 1997.

8 **Q4 What is your current position?**

9 A Engineering Technical Associate III.

10 **Q5 What are the duties of your position?**

11 A I am responsible for reviewing and analyzing the proposed construction plans of
12 water and sewer public utilities. I provide advice to the PSCKY on the engineering
13 aspects of water and sewer utility applications for rate adjustment and on the
14 compliance of water and sewer utilities with the PSCKY's administrative regulations
15 related to service quality and reliability.

16 **Q6 Prior to your employment with PSCKY, where were you employed?**

17 A From February 1993 to June 1997, I was employed as a project engineer by Central
18 Associated Engineers, of Lexington, Kentucky. In this position, I was responsible for
19 the planning, design and inspection of water and sewer systems. My responsibilities
20 also included the development and calibration of hydraulic analysis models, the design,
21 construction, and inspection of water booster pump stations and tanks, and the
22 preparation of engineering reports for use in applications for federal funding.

23 **Q7 Briefly describe your educational background.**

1 A I received a Bachelor of Science Degree in Civil Engineering from the University of
2 Kentucky in 1991.

3 **Q8 What professional licenses do you hold?**

4 A I am licensed by the Kentucky State Board of Licensure for Professional
5 Engineers and Land Surveyors as an Engineer in Training.

6 **Q9 To what professional societies or organizations do you belong?**

7 A I am a member of the American Water Works Association.

8 **Q10 As a part of PSC Case No. 2002-00116, did you conduct an examination of the**
9 **records and facilities of Martin County Water District ("MCWD")?**

10 A Yes. By Order dated July 1, 2001 in PSC Case No. 2002-00116, the PSCKY
11 directed its staff to examine MCWD's "books, records, and documents and to identify
12 any problems or irregularities that may affect or may have affected Martin District's
13 ability to perform its obligations under KRS Chapter 74 and Chapter 278." It further
14 directed Commission Staff to interview all appropriate persons involved in the water
15 district's past and present operations."

16 Between July 23 and July 25, 2002, Christina Whelan, Beverly Davis, and I visited
17 MCWD's offices to examine the water district's records and facilities. Ms. Davis and
18 Ms. Whelan are with the PSCKY's Financial Audits Branch. Ms. Davis and Ms.
19 Whelan focused their review on MCWD's accounting records. I focused my review
20 upon MCWD's operational records and inspected MCWD's water treatment and
21 distribution facilities. During the course of my inspection, I spoke with Maurice Mills,
22 MCWD's Office Manager, MCWD office employee Melanie Fletcher, and MCWD

1 plant employees Tim Coy and Abe McGinnis. After my initial visit, I returned to
2 MCWD's offices on July 31 and August 1, 2002 to complete my review.

3 **Q12 What records and facilities did you examine?**

4 A I examined all of MCWD's available operating records. I visited MCWD's water
5 treatment plant, pumping stations, raw water intake structure, meter vaults, and water
6 storage tanks.

7 **Q13 Please state the findings of your inspection.**

8 A I found the following violations of the PSCKY's regulations:

9 • MCWD is not currently making periodic reports to the PSCKY on its meter
10 tests as 807 KAR 5:006, Section 3(2) requires.

11 • MCWD is not keeping a record of its metering testing information as 807 KAR
12 5:006, Section 3(5) and Section 17 require.

13 • MCWD is not testing all water meters periodically as 807 KAR 5:006, Section
14 15 and 807 KAR 5:066, Section 15(2) require.

15 • When MCWD discovers that a customer's usage unduly high without
16 explanation, it does not conduct any testing on the customer's meter as 807 KAR 5:006,
17 Section 10(3) and (4) require.

18 • MCWD has not adopted an executed a safety program as 807 KAR 5:006,
19 Section 24 requires.

20 • MCWD has not adopted a safety manual with written guidelines as 807 KAR
21 5:006, Section 24(1) requires.

1 • MCWD has not adopted a written inspection procedure to assure safe and
2 adequate operation of its facilities as 807 KAR 5:006, Section 25 requires.

3 • MCWD has not kept or maintain inspection records on its system component
4 and facilities, such as wells, raw water pumps, valves, pumping stations, blow-off
5 hydrants and valves, water storage facilities and vehicles, as 807 KAR 5:006, Section
6 25(3) requires.

7 • MCWD does not maintain a record of customer complaints as 807 KAR 5:006,
8 Section 9 requires.

9 • MCWD does not flush all dead end distribution mains at least once annually as
10 as 807 KAR 5:066, Section 8(2) requires.

11 • MCWD does not properly size all its flush hydrants as 807 KAR 5:066,
12 Section 8(2) requires.

13 • MCWD does not maintain a record on its valves in its distribution system as 807
14 KAR 5:006, Section 22 requires.

15 • MCWD is not maintaining a recording pressure gauge on its distribution system
16 at least one week per month as 807 KAR 5:066, Section 5(2) requires.

17 • MCWD does not have a water shortage response plan as 807 KAR 5:066,
18 Section 17 requires.

19 **Q14 In addition to these violations, what other conditions did your inspection reveal?**

20 **A** MCWD is experiencing significant unaccounted-for water problems. It cannot account
21 for over 29.7 percent of the water that it produces and purchases. Administrative
22 Regulation 807 KAR 5:066, Section 6, deems any unaccounted-for water in excess of 15

1 percent of total water produced and purchased as unreasonable for rate-making purposes.
2 This problem results in part from the lack of a functioning telemetry system that would
3 permit MCWD to monitor the operation of its distribution system from one location. Such
4 capability would permit MCWD's system operator to detect more easily major water main
5 breaks and to prevent water storage tanks from overflowing.

6 MCWD's Buffalo Horn Branch Tank is currently non-operational. MCWD is in a
7 legal dispute with the owner of the property on which the tank sits. The exteriors of
8 several of MCWD's storage tanks are in poor repair. There is scaling, rust or exposed
9 steel on portions of the Clearwell Tank, the Wolf Creek Tank, and Black Log Tank. The
10 float gauges on Spear Tank 1, Marcus Wells Tank, Bob Galloway Tank, Black Log Tank
11 and Turkey Mountain Tank were not functioning properly when I inspected those tanks.
12 It did not appear that the grounds surrounding most of the tanks and pumping stations
13 were well maintained or secured.

14 **Q15 In your opinion, can MCWD provide reliable and adequate water service given the**
15 **current condition of its water treatment and distribution system?**

16 **A** No. To provide reasonably reliable and adequate service, MCWD needs to remedy
17 the violations of PSCKY regulations noted above. By maintaining the proper records
18 and conducting the appropriate inspections, MCWD will be able to identify the
19 problems in its water treatment and distribution system and can begin to correct those
20 problems.

21 In addition to correcting the violations, I recommend that MCWD obtain an
22 engineering and operational review of its entire system. This review should consist of
23 field inspections of MCWD's treatment and distribution system for needed repairs and

1 upgrades and the preparation of a hydraulic analysis to provide a complete
2 understanding of MCWD's system, assess its present problems and provide a platform
3 for corrective measures and planning for future development.

4 I further recommend that MCWD begin conducting annual tank inspections.
5 Several of its steel welded tanks should be repaired and painted. Security at all of
6 MCWD's storage tanks should also be reviewed to determine the best means of
7 restricting public access.

8 I also recommend that MCWD perform a comprehensive review of all pumping
9 stations and take steps to permit these stations to be controlled automatically. These
10 stations are designed to operate on automatic controls, but currently do not. Operation
11 on automatic controls is likely to reduce water loss and to also reduce labor and power
12 costs and possibly maintenance costs.

13 **Q17 Does this complete your written testimony?**

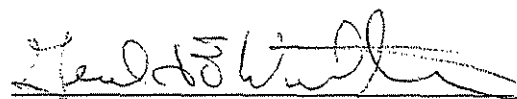
14 **A Yes.**


James R. Rice

COMMONWEALTH OF KENTUCKY)

COUNTY OF FRANKLIN)

Subscribed and sworn before me by James R. Rice, this 17th day of September, 2002.


Notary Public

My commission expires 24 June 2004.